

**LIST OF
KEY OCCUPATIONS
IN THE
PETROLEUM AND NATURAL GAS
INDUSTRIES**

**Prepared by the
NATIONAL PETROLEUM COUNCIL**

LIST OF
KEY OCCUPATIONS
IN THE
PETROLEUM AND NATURAL GAS
INDUSTRIES

April 1969

Prepared by the
NATIONAL PETROLEUM COUNCIL'S COMMITTEE
ON PETROLEUM AND GAS INDUSTRIES
MANPOWER REQUIREMENTS

Stanley Learned, *Chairman*
with the assistance of the
Technical Subcommittee
Frank Piersol, *Chairman*

NATIONAL PETROLEUM COUNCIL

Jack H. Abernathy, *Chairman*
E. D. Brockett, *Vice-Chairman*
Vincent M. Brown, *Secretary-Treasurer*
Maxwell S. McKnight, *Assistant Secretary-Treasurer*

Petroleum Advisory Council
to the

DEPARTMENT OF THE INTERIOR
Washington, D.C.

Walter J. Hickel, *Secretary*
Hollis M. Dole, *Assistant Secretary-Mineral Resources*
Gene P. Morrell, *Deputy Assistant Secretary-Mineral Resources*

and to the
OFFICE OF OIL AND GAS

John Ricca
Acting Director

Prepared by the
National Petroleum Council

in response to a request from the
Department of the Interior

LIST OF
KEY OCCUPATIONS
IN THE
PETROLEUM AND NATURAL GAS
INDUSTRIES

* * * * *

A selected listing of occupations with Dictionary of Occupational Titles and Codes, or Definitions references, representative of the skills needed for continuity of operations and the availability of essential products.

The listing is restricted to "key occupations" and does not represent the full manning requirements. In general, occupations needing less than six months accelerated training have been omitted.

Occupations listed under the right hand column refer to those listed in the U.S. Department of Labor *Dictionary of Occupational Titles* (1965) Volumes I and II, Third Edition.

This list does not include chemical plant occupations.

Prepared as a Supplemental Section
to the
National Petroleum Council Report
*Skills and Occupations of People in the
United States Oil and Gas Industries*

Issued: March, 1969

CONTENTS

	<u>PAGE NO.</u>
1. CENTRAL AND OTHER PRINCIPAL OFFICES	
General Description	1
Corporate	1
Executive and Coordination	2
Professionals and Semi-professionals	3
Office General	5
2. PETROLEUM PRODUCTION AND NATURAL GAS PROCESSING DIVISION	
General Description	7
Exploration	7
Land	11
Drilling and Production	12
Natural Gas Processing	16
Exploration and Production Research and Technical Services	18
3. PETROLEUM REFINING AND MANUFACTURING DIVISION	
General Description	23
Refineries	23
Research and Technical Services	29
4. PETROLEUM SUPPLY AND TRANSPORTATION DIVISION	
General Description	31
Marine	31
Oil and Products Pipe Lines	34
Gas Transmission Pipe Lines	37
Air-Rail-Truck Traffic	41
Supply	42
5. PETROLEUM DISTRIBUTION AND MARKETING DIVISION	
General Description	43
Products Supply and Performance	43
Technical and Field Representatives	44
Bulk Plants and Terminals	45
6. GAS DISTRIBUTION INDUSTRY	
Executive	47
Finance and General Administrative	48
Engineering	50
Operations	51

CENTRAL AND OTHER PRINCIPAL

OFFICES

KEY OCCUPATIONS IN
CENTRAL AND OTHER PRINCIPAL OFFICES

GENERAL DESCRIPTION

These establishments are primarily engaged in corporate and general administrative, supervisory, purchasing, engineering, traffic, financial and accounting, personnel, labor relations and other management functions performed centrally for other establishments of the same company.

In some cases all or part of these functions may be conducted in a major operating establishment. This would be the likely situation in the case of a small company, partnership, or individual proprietorship.

CORPORATE - KEY OCCUPATIONS

Individuals classified as officials, managers, proprietors or agents, who are concerned with the business affairs of a company or enterprise, many of whom are company directors or responsible to a board of directors. May be located in a parent company or subsidiary's central headquarters; some may be located in other principal offices of the company.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Chairman of the Board	President Special Additional Definition - A director who presides at Board meetings, and may preside at stockholder meetings, in which the transactions, accounts, and affairs of the company are reviewed and passed upon, including the election of Board members and corporate officers and other corporate officers and other authorizations usual to a Board's province. May also serve as chief executive of a company.	189.118 022
President	President	189.118 022
Vice President (Executive - Senior - Function)	Vice President	189.118 026
Secretary	Administrative Secretary	169.168 018
Assistant Secretary	Administrative Secretary	169.168 018
Treasurer	Treasurer	161.118 018
Assistant Treasurer	Treasurer	161.118 018
Controller	Controller	186.118 014
Assistant Controller	Controller	186.118 014
General Counsel	Lawyer, Corporation	110.118 026
Stock Transfer Agent	Stock-Transfer Clerk, Head	249.138 018

EXECUTIVE AND COORDINATION - KEY OCCUPATIONS

Officials, managers and professionals concerned with and responsible for proper and economic use of assigned resources in such forms as physical assets, money, materials and human talent; for planning, organizing, directing, coordinating, guiding and otherwise controlling the activities of the business or assigned segment; for invention, innovation and efficiencies; and for internal and external relationships required to accomplish objectives.

May be located in a parent company or subsidiary's headquarters; some may be located in other principal offices of the company.

Occupations are usually further defined according to field of activity or function, e.g., exploration, production, manufacturing, transportation, marketing, credit, employee or public relations, etc.; by organizational level, e.g., department, division, section, etc.; and by geographical province, e.g., head office, region, area, division, district, etc.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Chairman of the Board	(See corporate definition)	189.118 022
President	President	189.118 022
Vice President (Executive - Senior - Function)	Vice President	189.118 026
Director, of -	Manager, Industrial Organization	189.118 018
General Manager, of -	Manager, Industrial Organization	189.118 018
Coordinator, of -	Manager, Industrial Organization	189.118 018
General Superintendent	Production Superintendent	183.118 014
Manager, Credit	Manager, Credit and Collections	168.168 050
Manager, Insurance	Manager, Insurance	186.118 030
Manager, Purchasing	Purchasing Agent	162.158 102
Buyer	Purchasing Agent	162.158 102
Manager, Supplies (Oil & Gas)	Manager, Contracts	163.118 014
Manager, Traffic	Manager, Traffic	184.168 094
Manager (Field Office)	Manager, Branch	183.118 010
Office Manager	Manager, Office	169.168 062
Assistant, to -	Junior Executive	189.168 014
Supervisor, Section	Chief Clerk II	169.168 026
Security Officer	Security Officer	189.168 022

PROFESSIONALS AND SEMI-PROFESSIONALS
KEY OCCUPATIONS

May be located in a parent company or subsidiary headquarters - or in other principal offices of the company.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Accountant	Accountant	160.188 010
	Accountant, Cost	160.188 018
	Accountant, Tax	160.188 034
	Accountant, Budget	160.188 014
	Accountant, Systems	160.188 030
Actuary	Actuary	020.188 010
Architect	Architect	001.081 010
Attorney	Lawyer, Corporation	110.118 026
Attorney	Lawyer, Real Estate	110.118 038
	Title Attorney	110.118 050
	Tax Attorney	110.118 046
	Claim Attorney	110.118 010
Auditor	Auditor	160.188 038
Computer Operator	Digital-Computer Operator	213.382 018
	<u>Special Additional Definition</u> - Operates a computer and related equipment. This is the journeyman level requiring a person skilled in the operation of a computer and its components. The system includes such equipment as magnetic tape units, printers, card readers and punches.	
Computer Programmer	Programer, Business	020.188 026
Computer Programmer	Programer, Engineering and Scientific	020.188 030
Draftsman	Draftsman, Oil and Gas	017.281 062
Draftsman	Draftsman, Map	017.281 058
Economist	Industrial Economist	050.088 022
Engineer	Engineer	
	Chemical	008.081 014
Civil	Civil	005.081 014
Corrosion	Electrolysis-And-Corrosion-	
	Control	003.187 030
Electrical	Electrical	003.081 018
Industrial	Industrial	012.188 030
Mechanical	Mechanical	007.081 038
Petroleum	Petroleum	010.081 022
Gas	Petroleum	010.081 022
Metallurgist	Metallurgist, Physical	011.081 022
Welding	Mechanical	007.081 038
Engineer/Analyst (Systems)	Mathematical Technician	020.188 022
	(Alternate Title: Engineering Analyst II)	

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Engineer/Analyst (Systems)	Engineering Analyst I (Alternate Title: Systems Analyst, Engineering - Scientific)	020.088 010
Hygienist/Toxicologist	Biochemist	041.081 030
Industrial Hygienist	Industrial Hygienist	079.188 010
Industrial Toxicologist	Industrial Health Engineer	012.188 034
Job Analyst	Job Analyst	166.088 010
Labor Relations Specialist	Labor Relations Specialist	169.118 022
Librarian	Librarian	100.168 026
Manager/Supervisor (Computer Center)	Manager, Electronic Data Processing	169.168 058
Manager/Supervisor Employee Relations	Manager, Personnel	166.118 022
Employment and Recruitment	Manager, Employment	166.168 026
Training	Director, Educational (Education)	166.118 010
Wage and Salary	Salary-and-Wage Administrator	169.118 026
Labor Relations	Director, Industrial Relations	166.118 014
Safety	Director, Safety	166.118 018
Benefits and Records	Benefits-and-Service-Records Supervisor	166.168 010
Mathematician	Mathematician	020.088 018
Nurse	Nurse, Staff, Occupational Health Nursing	075.378 026
Operations-Research Analyst	Operations-Research Analyst	020.088 022
Physician	Physician, Occupational	070.108 070
Placement Specialist	Employment Interviewer II	166.268 018
Physical Scientists		
Chemist	Chemist, Analytical	022.081 014
	Chemist, Inorganic	022.081 034
	Chemist, Organic	022.081 042
	Chemist, Physical	022.081 046
Geologist	Geologist	024.081 018
Geophysicist	Geophysicist	024.081 038
Physicist	Physicist	023.081 010
Safety Engineer	Safety Engineer	012.081 010
Safety Specialist	Safety Inspector	168.284 010
Statistician	Statistician, Physical Science and Engineering	020.188 046
Surveyor	Surveyor	018.188 026
Systems Analyst	Systems Analyst, Business-Electronic Data Processing	012.168 022
Translator	Translator	137.288 022

OFFICE GENERAL - KEY OCCUPATIONS

Experienced workers and "lead supervisors" who are part of the manager and professional support groups in a parent company or subsidiary's headquarters and in the principal offices and establishments of the company. Occupations are generally described according to activity or function, e.g., accounting, cost, tax, budget, material, traffic-rate, dispatching, cashier, etc. - and by organizational and geographical province, e.g., personnel, credit, division, district, etc.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Analyst, Rate	Statistician, Applied	020.188 034
Bookkeeper	Bookkeeper I	210.388 022
Clerk, Senior	Chief Clerk	169.168 026
	Clerical Technician	161.268 010
Engineer (Building)	Stationary Engineer	950.782 054
Secretary	Secretary	201.368 018
Stenographer, Legal	Stenographer	202.388 014
Superintendent (Building)	Maintenance Foreman	891.138 014
Supervisor Tariffs Rates	Rate Engineer	161.188 010
	Rate Supervisor	222.138 022
Tabulating Machine Operator	Tabulating-Machine Operator	213.782 010

PETROLEUM PRODUCTION AND NATURAL GAS

PROCESSING DIVISION

KEY OCCUPATIONS IN PETROLEUM
PRODUCTION AND NATURAL GAS PROCESSING DIVISION

GENERAL DESCRIPTION

ACTIVITY

This industry division is composed of establishments primarily engaged in the search for, discovery, development and operation of crude petroleum and natural gas field properties and gas processing plants. Incident to this effort is the secondary objective of locating and exploiting deposits of non-hydrocarbon minerals.

Major activities are exploring for prospects; acquiring land and leases; drilling of exploratory and field development wells; completing and equipping wells; producing and operating surface equipment and liquid hydrocarbon extraction plants; and all other activities incidental to making crude oil, liquid hydrocarbons and natural gas marketable or useable up to the point of shipment from the producing properties and plants.

SPECIAL CHARACTERISTICS

The inherent risk factors of exploration, the physical difficulties involved in drilling on land and offshore to great depths with potential hazardous pressures, the safe and efficient exploitation of field reservoirs - all require extensive dependence on research and technology.

State conservation laws generally cover the spacing, drilling, casing, completion, and operation of oil and gas wells.

This industry division depends on a large number of general and specialized service establishments that are (1) primarily engaged in drilling wells for oil and gas for others on a contract, fee, or other basis, (2) primarily engaged in geophysical, geological and other exploration work on a contract, fee, or other basis, and (3) primarily engaged in performing oil and gas field service such as excavating slush pits; grading and building foundations at well locations; well surveying; shooting wells; perforating casing; acidizing and chemically treating wells; hydraulically fracturing wells; and cleaning out, bailing, swabbing wells; designing, manufacturing, and installing well equipment such as Christmas trees, casing heads, packers, plugs; furnishing and pumping cement to seal and isolate producing horizons around casing; and many other related services.

ORGANIZATION

This industry division's activities may be organized and conducted in a separate company, large or small; in a functional department of an integrated company; in geographical regions, areas, divisions, districts, fields, plants and laboratory establishments.

The activities are customarily classified into four general categories, namely: Exploration, Drilling and Production, Natural Gas Processing, Exploration and Production Research and Technical Services.

EXPLORATION - KEY OCCUPATIONS

Exploration is concerned with finding new oil, gas, and mineral resources to meet increasing demands and replace depleted reserves. It is conducted by two closely coordinated prospecting teams commonly known as geological and geophysical groups. These groups are assisted by scouts who collect information on local industry activity such as leasing and well drilling.

GEOLOGICAL

The geological group consists of geologists and geological specialists, such as paleontologists and stratigraphers, who collect, study, and interpret geological data to determine the most favorable structures where new oil, gas, and mineral reserves might be found. Geologists conduct surveys in the field and make maps of geological formations exposed at the earth's surface; they construct lithologic logs of the subsurface from drill cuttings and cores and prepare maps of subsurface conditions and formations by correlating and integrating all available geological and geophysical information and data. Based on the results of this work, decisions are made to embark upon extensive exploration programs, acquire or surrender acreage, and drill wildcat wells.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Captain (Marine Craft)	Master, Ship (water trans.)	197.168 026
Draftsman	Draftsman, Geological	010.281 018
Draftsman, Supervisor	Supervisor, Mapping	017.168 014
Driller (Geologic)	Prospecting Driller	930.782 050
Economic Geologist	Geologist <u>Special Additional Definition</u> - A professional who searches for economic ore deposits using his knowledge of geology, chemistry, and physics. Exploration involves a knowledge of the size, shape, position, and value of an ore body. A well-trained explorationist that brings to bear the specialties of the geomorphologist, mineralogist, petrologist, photo-geologist, and stratigrapher to help locate economic mineral resources. Involves field work to map outcropping and/or subsurface rocks occurring in an area as to their composition, mineralogy, alteration, lithology, and structural complexities affecting their mineralization. Indications of mineralization may be producing mines; shows in drill holes, outcroppings or trenches; geochemical, electrical, and/or radioactive geophysical anomalies. Prepares surface and subsurface maps and cross sections depicting the stratigraphic arrangement, composition, and structural orientation of beds, faults, fractures, volcanic intrusions, necks, breccia pipes, veins and other strata. Examines aerial photographs, evaluates results of geophysical surveys, and determines through chemical analyses the various metal fractions in a rock body. Directs core drilling programs to recover rock samples for analyses of metal contents. Recommends acquisition, retention, or release of property leases, claims, options, fee ownerships and operation contracts. Prepares geologic reports and maps, interprets research data, and recommends further action and study. Estimates ore reserves through application of results from drill data and assays and consults with Mining Engineers concerning additional economic and mining methods. Usually assists exploitation team during actual mining operations in detailed mapping of ore body reserves and may then be designated mine geologist or production geologist.	024.081 018

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES*	
TITLE	CODE	
Engineer (Marine Craft)	Engineer (water trans.)	197.130 014
Geological/Geophysical Information Analyst	Engineering Analyst I (profess & kin) 020.088 010 <u>Special Additional Definition</u> - Development of computer applications to earth sciences. Con- verts scientific, and other technical formula- tions to format processable by computer. Resolves symbolic formulations, prepares logical flow charts, block diagrams, and encodes resolvent equations for processing by applying knowledge of advanced mathematics and understanding of computer capabilities and limitations. Has broad knowledge in the field of geology and confers with other technical personnel to evolve new techniques to the solution of geological geophysical problems using the latest advances in computer technology. Supervises Electronic Data Processing and per- sonnel involved. Develops new subroutines for specific area of application or expands on applicability of current programs, to simplify statement, programming, or coding of future problems.	
Area/District Geologist	Geologist	024.081 018
Geologist, Engineering	Geologist, Petroleum	024.081 022
Geologist, Petroleum	Geologist, Petroleum	024.081 022
Laboratory Technician	Laboratory Assistant I Laboratory Tester I	024.381 010 029.281 018
Mineralogist	Mineralogist	024.081 050
Paleontologist	Paleontologist	024.081 062
Petrologist	Petrologist	024.081 066
Paleontological Technician	Paleontological Helper	024.384 010
Photogeologist	Photogeologist	024.081 070
Photogrammetrist	Photogrammetrist	018.281 018
Stratigrapher	Stratigrapher	024.081 078
Structural Geologist	Geologist 024.081 018 <u>Special Additional Definition</u> - Makes field and laboratory studies of structural features of the earth, including folds, faults, and smaller- scale deformational features seen in the textures and fabrics of rocks; interprets the history of development of a region or area from field and laboratory investigations; locates structural traps for oil and gas, and defines areas where other mineral deposits might occur.	
Surveyor	Surveyor, Geophysical Prospecting Surveyor	018.188 046 018.188 026

GEOPHYSICAL

The geophysical group is composed of geophysicists, seismologists, electrical engineers, physicists, and mathematicians who conduct geophysical surveys in the field and, based on their interpretation of the results of this work, construct maps showing subsurface formations and structures. This information is closely integrated with the results of studies made by the geologists. This group utilizes various complex physical and electrical instruments, such as the seismograph, gravimeter, magnetometer, and electrical-resistivity measuring devices. The jobs are highly technical and require people with academic and specialized training followed by practical experience to qualify for this work.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Captain (Marine Craft)	Master, Ship (water trans.)	197.168 026
Civil Engineer	Civil Engineer	005.081 014
Computer	Computer, Prospecting	010.288 010
	Computer, Seismograph	010.288.014
	Computer, Chief, Seismograph	010.168 005
Draftsman	Draftsman, Mechanical	007.281 014
	Draftsman, Geophysical	010.281 022
Driller (Shothole)	Prospecting Driller	930.782 050
Electrical Engineer	Electrical - Prospecting Engineer	003.081 026
Engineer (Marine Craft)	Engineer (water trans.)	197.130 014
Equipment Designer	Tool Engineer (profess & kin)	007.081 070
Equipment Mechanic	Machinist I (mach. shop)	600.280 030
Geological/Geophysical Information Analyst	Engineering Analyst I (profess & kin)	020.088 010
	Special Additional Definition - Development of computer applications to earth sciences. Converts scientific, and other technical formulations to format processable by computer. Resolves symbolic formulations, prepares logical flow charts, block diagrams, and encodes resolvent equations for processing by applying knowledge of advanced mathematics and understanding of computer capabilities and limitations. Has broad knowledge in the field of geology and confers with other technical personnel to evolve new techniques to the solution of geological geophysical problems using the latest advances in computer technology. Supervises Electronic Data Processing and personnel involved. Develops new subroutines for specific area of application or expands on applicability of current programs, to simplify statement, programming, or coding of future problems.	
Area/District Geophysicist	Geophysicist	024.081 038

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Geophysical Technician (petrol. production)	Technician Special Additional Definition - Works in direct support of Geophysical Engineers and Geophysicists by using theoretical and practical knowledge of geophysical principles; may assist in operation and maintenance of analog and digital seismic recording instruments, supervise field laborers; is responsible for operation and minor maintenance of digital and analog playback computers and related electronic equipment.	024.284 010
Instrument Mechanic	Instrument-Maker-and-Repairman Instrument Repairman I (any ind)	600.280 026 710.281 058
Observer	Observer, Seismic Prospecting Observer, Electrical Prospecting Observer, Gravity Prospecting	010.168 018 010.288 018 010.288 022
Party Supervisor	Observer, Seismic Prospecting	010.168 018
Radar, Radio Operator	Radio Officer (water trans)	193.282 022
Radar, Radio Repairman	Radio Mechanic II (any ind) Electronics Mechanic (any ind)	823.281 030 828.281 022
Seismologist	Geophysicist Geophysical Prospector	024.081 038 024.081 034
Seismologist, Party Chief	Manager, Field Party, Geophysical Prospecting	181.168 010
Shooter	Shooter, Seismograph	931.381 014
Surveyor	Surveyor Surveyor, Geophysical Prospecting	018.188 026 018.188 046

SCOUTING

Scouts are responsible for the collection and dissemination of local drilling, land and geophysical data.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Chief Scout	Scout, Chief	010.168 030
Scout	Scout	010.288 026

LAND - KEY OCCUPATIONS

Land is responsible for the acquisition of land and leases, curing of titles, and the maintenance of land records and royalty payments. These activities may be performed by two groups, generally designated as land, and title and rental groups.

LAND GROUP

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Draftsman	Draftsman, Map (profess & kin)	017.281 058
Area/District Manager	Manager, Leasing	186.118 034
Land Man	Leaseman	191.118 030
Supervisor, Drafting	Draftsman, Map	017.281 058
Supervisor, Surveying	Surveyor	018.188 026
Survey Party Chief	Surveyor	018.188 026
Surveyor	Surveyor	018.188 026

TITLE AND RENTAL GROUP

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Analyst	Title Clerk	162.288 010
Senior Analyst	Title Examiner I (profess & kin)	119.288 018
Supervisor (Title Rental and Records)	Manager, Rental Department	186.168 038
Supervisor (Title)	Title Supervisor (profess & kin)	119.168 018

DRILLING AND PRODUCTION KEY OCCUPATIONS

These occupations are concerned with the drilling of field wells and of exploratory (wildcat) wells at locations determined by exploration; the proper development of oil and gas reserves including reserves acquired by purchase; the daily production from properties and gas processing plants; and the maintenance of facilities and equipment.

OPERATIONS

Production operations are handled primarily by men with technical training and experience in drilling and production operations. They are responsible for drilling, testing, and treating exploratory and development wells and producing these wells in accordance with federal, state, and company regulations. Also, they are responsible for the day-to-day maintenance of facilities and field equipment.

SUPERVISORS - responsible for the initiation, coordination, development and completion of optimum producing oil and gas wells. Inherent in achieving this end objective are: maximum utilization of existing and potential human, material and natural resources, establishment of over-all programs of production, maintenance and safety and, finally, the achievement of these goals within established legal and economic boundaries.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Boat Captain	Master, Ship (water trans.)	197.168 026
Boat Engineer	Engineer (water trans.)	197.130 014
Construction and/or Maintenance Foreman	Foreman, Pipe Lines	862.131 010
Development Foreman	Foreman, Production	939.131 010
Area/District Gauger	Gager, Chief	914.134 010
Area/District Superintendent/Manager	Superintendent, Drilling and Production	181.168 018
Driller	Cable Driller	930.280 010
	Rotary Driller	930.782 054
Drilling Foreman	Foreman, Production	939.131 010
Drilling Superintendent	Superintendent, Drilling and Production	181.168 018
Field Superintendent	Superintendent, Drilling and Production	181.168 018
Lease Foreman	Foreman, Production	939.131 010
	Gasman, Head	549.131 010
Material Supervisor	Manager, Warehouse (any ind)	184.168 114
	Manager, Chief Material	184.168 070
Port Captain	Superintendent, Marine	184.168 186
Production Engineer, Chief	Petroleum Engineer, Chief	010.168 022
Water System Foreman	Foreman, Pumping Station	954.130 010

FIELD WORKERS - under the general supervision of Driller, Production Foreman, or Maintenance Foreman, these men are responsible for completing the objectives of their supervisors (as described above). They perform the actual functions of: derrick building, pipe setting, perforating formations, pumping, well workovers, engine overhaul and maintenance, transportation and storage of materials and many others associated with the drilling and maintenance of oil or gas wells.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Able-Bodied Seaman	Able Seaman	911.884 010
Derrickman	Derrickman	930.782 026
Deckhand	Deckhand	911.887 022
Electrician	Electrician	824.281 014
Lease Gas Processor and Gauger	Gasman	549.782 018
Logging/Perforating/Oil Well Services Unit Operator	Hoist Operator	932.883 014

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Maintenance Mechanic	Maintenance Mechanic	638.281 022
Maintenance Technician	Maintenance Technician	638.281 026
Machinist	Machinist I	600.280 030
Materials Coordinator	Materials Coordinator	221.168 010
Meterman	Meter Repairman	710.281 066
Motorman	Rotary-Rig Engineman	950.782 050
	Oil-Tool Maintenance Man	629.381 014
	Clean-Out Driller	930.883 014
Pumper Gauger	Oil Pumper	914.782 014
Pump Repairman	Pump Serviceman	630.281 046
Radio Technician	Radio Repairman	720.281 010
Tester	Tester	029.281 026
Tool Dresser	Oil-Tool Maintenance Man	629.381 014
	Tool Dresser (petrol. production)	639.781 010
Truck Driver, Heavy Duty	Truck Driver, Heavy	905.883 022
Welder	Welder, Combination	812.884 014
Well Cleaner	Clean-Out Driller	930.883 014
Well-Logging Operator	Well-Logging Operator, Mud Analysis	010.281 038

ENGINEERING

Professionals and semi-professional workers are seeking new and better methods for the recovery of underground liquid and gas reserves. A basic part of this objective is developing programs such as gas lift, water flood, multi-zone production, increased drilling depths, etc. Secondary to the actual recovery operations are engineering features such as the development of corrosion-resistant metals, large offshore drilling platforms, etc.

The industry titles marked with an asterisk (*) generally have duties which are more nearly defined by Petroleum Engineer 010.081 022. However, all such personnel must be qualified to perform or have the formal educational background and potential to perform in one of the engineering disciplines as defined in the Dictionary of Occupational Titles as:

Civil Engineer	005.081 014	Mechanical Engineer	007.081 038
Chemical Engineer	008.081 014	Industrial Engineer	012.188 030
Electrical Engineer	003.081 018	Petroleum Engineer	010.081 022
Electronic Engineer	003.081 034		

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
*Area/District Engineer	Chemical Engineer	008.081 014
	Mechanical Engineer	007.081 038
*Civil Engineer	Civil Engineer	005.081 014
	Construction Engineer	005.081 018

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
*Corrosion Engineer	Electrolysis-and-Corrosion- Control Engineer	003.187 030
*Development Engineer	Tool Engineer	007.081 070
Development Geologist	Geologist, Petroleum	024.081 022
Draftsman	Draftsman, Oil and Gas	017.281 062
*Drilling Engineer	Petroleum Engineer	010.081 022
*Electrical Engineer	Electrical Engineer	003.081 018
Engineering Aide	Mechanical-Engineering Technician	007.181 026
*Engineering Manager	Petroleum Engineer, Chief	010.168 022
Head Chainman	Engineer, Chief	010.168 010
Instrumentman	Chainman (any ind)	018.687 010
Laboratory Technician	Instrument Man	018.188 014
Log Engineer	Level Man	018.188 018
*Mechanical Engineer	Transit Man	018.188 050
Petroleum Engineering Technician (petrol. production)	Laboratory Assistant	024.381 010
	Formation-Testing Operator	930.281 018
	Mechanical Engineer	007.081 038
	Petroleum Engineering Technician	010.181 010
	<u>Special Additional Definition - Works in direct support of Petroleum Production Engineering personnel by using theoretical and practical knowledge of fundamental engineering principles to develop, record, analyze, and report data in areas of Drilling, Production, and Natural Gas. In Drilling area, may plan drilling and workover procedures including cost estimates, well programs, and comparison of performance with objectives; casing design; well histories and sketches of well bores and completion procedures; collaborate with Field Superintendent (Superintendent Drilling & Production 181.168 018) concerning field drilling and workover problems such as running high-strength tubular goods, setting liners, cementing, mud treating, controlling well kicks, implementation of drilling programs. In Production area, may develop specifications for roads, well locations, miscellaneous construction projects; supervise selected construction and maintenance jobs including surveying, sanitation; supervise application of protective coating; investigate corrosion problems, analyze corrosion records and maintain surveillance of control programs; control of quality of water injected either in additional oil recovery or water disposal projects; maintain records of storm chokes, reservoir pressure, casing pressures, and subsurface temperatures; schedule pressure/temperature surveys; interpret chart data and perform various calculations to determine fluid levels, bottom hole pressures, subsurface temperatures; design artificial lift installations and maintain surveillance of performance; supervise oil and gas well testing and make</u>	

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
	Petroleum Engineering Technician <u>Special Additional Definition - Continued</u> analysis including interpretation of dynamometer measurements, compute open-flow potential of gas wells, gas-oil ratios, productivity index, and reservoir pressure build-up; supervise installation and operation of lease automation equipment, analyze malfunctions and repair or call proper specialist to repair; assist with planning, installation and maintenance of communication, telemetering, and supervisory control systems; follow up equipment and material performance; prepare reports indicating performance and utility. In Natural Gas area, may collect process data, develop mol balance data, supervise gas measurement, calculate meter coefficients; calculate gas compressor loadings; coordinate gas well testing, treating, production and testing; maintain surveillance of gas plant heat exchanger equipment; analyze operating data from gas processing equipment, recommend changes to improve efficiency and supervise gas sales station startup; analyze gas compressor efficiency, recommend operational changes.	
Petroleum Engineer	Petroleum Engineer	010.081 022
*Reservoir Engineer	Petroleum Engineer <u>Special Additional Definition - Studies and evaluates data on history of individual wells, subsurface pressure surveys, known or anticipated characteristics of formations, core analysis, electrical formation surveys, etc., to aid in forecasting calculated potential of oil and gas recovery from individual reservoirs, estimating the natural flow life of wells and evaluating the producing possibilities of oil and gas-bearing formations found in individual wells.</u>	010.081 022
Surveyor	Surveyor	018.188 026

NATURAL GAS PROCESSING - KEY OCCUPATIONS

Natural Gas Processing is concerned with the processing of natural gas including the recovery of ethane, propane, isobutane, butane, isopentane, natural gasoline and stabilized distillate as well as the compression of gas for delivery to gas pipeline transmission companies, and for reservoir pressure maintenance both in cycling and in secondary recovery operations.

Plants designed to treat natural gas make use of one or more of the following processes: compression, absorption, adsorption, distillation, fractionation, and refrigeration. Auxiliary plant equipment includes steam and electrical generators and facilities to produce and treat cooling water.

SUPERVISORS - direct the actual functions which are mandatory for the continued operation of Natural Gas Processing Facilities. These include receiving a continuous stream of raw gases; directing and coordinating maximum utilization of facilities; controlling day-to-day and long-term process and product variables; planning and directing major improvements, renovations and repairs to plant and field facilities.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Area/District Superintendent	Superintendent, Drilling and Production	181.168 018
Field Maintenance Foreman	Maintenance Foreman	891.138 014
Gas Measurement Supervisor	Superintendent, Measurement	184.168 190
Meter Engineer	Gasman	549.782 018
Material Supervisor	Manager, Warehouse	184.168 114
Plant Foreman	Production Superintendent	183.118 014
Plant Superintendent	Production Superintendent	183.118 014

PLANT WORKERS - nonsupervisory personnel who maintain operating and mechanical variables within predefined limits. These men have the responsibility for detecting and correcting malfunctions within plant equipment. Their duties extend to assisting in the performance of major overhaul and renovation projects, usually under the general supervision of a plant or maintenance foreman.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Bottom Hole Pressure Operator	Technical Operator	930.188 014
Electrician	Electrician	824.281 014
Instrument Man	Instrument Repairman I (any ind)	710.281 058
Maintenance Mechanic-Gas Plant	Millwright	638.281 034
Operator	Stationary Engineer	950.782 054
Repairman	Repairman	630.281 058
Warehouseman	Stock Clerk	223.387 094
Welder	Welder, Gas (welding)	811.884 014

TECHNICAL STAFF - who initiate and originate changes in the design and operation of currently operating Natural Gas Liquids Extraction Facilities. Devise new methods for more efficiently treating and testing raw and finished products; seek new methods for increasing the liquid recovery potential of Natural Gas Extraction Facilities; maximize operating levels of temperatures, pressures and flow input.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Chemist, Plant	Laboratory Tester I (any ind)	029.181 018
Chief Chemist	Laboratory Chief	976.131 014
Laboratory Technician	Laboratory Tester II	029.281 018
Area/District Engineer	Engineer, Chief	010.168 010
Gas Process Engineer	Chemical Engineer	008.081 014

EXPLORATION AND PRODUCTION RESEARCH AND
TECHNICAL SERVICES - KEY OCCUPATIONS

Basic and applied research and development activities and other technical services variously called - Production Research, Geochemical Research, Well Drilling, Completion, and Stimulation Research; Formation Evaluation Research, Oil and Gas Recovery Research, Numerical Analysis Research; Development and/or Technical Services Department, Division, Research Center, Laboratory, or Group (includes Technical Information, Patent Coordination, Technical Reports, Technical Administration, Research Shop, Computer Center).

LABORATORY ADMINISTRATION

Professionals concerned with the implementation of R & D programs, budgets and related administrative functions; who participate in the setting of research objectives; who coordinate professional advice and the exchange of technical information to and from operating management.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
General Manager/ Manager/Director	Director, Research and Development (any ind)	189.118 014
Director/Manager Basic Research	Research Engineer, Chief	010.168 026
Applied Research	Research Engineer, Chief	010.168 026
Technical Services	Research Engineer, Chief	010.168 026
Consultant, Sciences		
Chemistry	Chemist, Organic	022.081 042
Geology	Geologist	024.081 018
Physics	Physicist	023.081 010
Mathematics	Mathematician	020.088 018

PROFESSIONALS

Highly skilled professional scientists, technologists, and engineers working on improved and better methods for or related to finding crude oil, gas, and minerals, for effectively exploiting discovered deposits of these materials, and for bringing these materials to the earth's surface, and working toward discovery, development and evaluation of new methods of finding, exploiting, and producing (recovering) crude oil, gas, and minerals.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Chemical Engineer	Chemical Engineer	008.081 014
Chemist	Chemist, Organist (profess & kin)	022.081 042
Civil Engineer	Civil Engineer (profess & kin)	005.081 014
Computer Programmer	Programer, Engineering and Scientific (profess & kin)	020.188 030
Electrical Engineer	Electrical-Research Engineer (profess & kin)	003.081 030

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Geochemist	Chemist, Analytical	022.081 014
	Chemist, Inorganic	022.081 034
	Chemist, Organic	022.081 042
	Chemist, Physical	022.081 046
	<u>Special Additional Definition</u> - The geochemist is a professional scientist who applies chemical and physical principles and techniques to the solution of geologic problems. He conducts research on the composition of earth materials, including sedimentary, igneous, and metamorphic rocks, and the fluids contained in these. He conducts research by the application of chemistry and physics on the origin and geologic history of rocks and fluids contained in the earth's crust. He determines by use of radioactivity decay schemes the age in an absolute chronology of rocks and minerals. He utilizes chemical composition of rocks for stratigraphic correlation.	
Geologist	Geologist	024.081 018
Geophysicist	Geophysicist	024.081 038
Geophysical Technician (petrol. production)	None (Technician)	024.284 010
	<u>Special Additional Definition</u> - Works in direct support of Geophysical Engineers and Geophysicists by using theoretical and practical knowledge of geophysical principles; may assist in operation and maintenance of analog and digital seismic recording instruments, supervise field laborers; is responsible for operation and minor maintenance of digital and analog playback computers and related electronic equipment.	
Linguist-Translator	Translator	137.288 022
Mathematician	Mathematician	020.088 018
Mineralogist	Mineralogist	024.081 050
Mechanical Engineer	Mechanical Engineer	007.081 038
Metallurgist or Metallurgical Engineer	Metallurgist, Extractive	011.081 018
	Metallurgist, Physical	011.081 022
	Chemist, Inorganic	022.081 034
Patent Agent	Patent Agent (profess & kin)	119.168 014
Mining Engineer	Mining Engineer	010.081 018
Patent Attorney	Lawyer, Patent (profess & kin)	110.118 030
Paleobotanist	Paleontologist	024.081 062
Petroleum Engineer	Petroleum Engineer	010.081 022
Petrologist	Petrologist	024.081 066
Photogeologist	Geologist	024.081 018
Physicist	Physicist	023.081 010

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Stratigrapher	Stratigrapher	024.081 078
Structural Geologist	Geologist Special Additional Definition - Makes field and laboratory studies of structural features of the earth, including folds, faults, and smaller-scale deformational features seen in the textures and fabrics of rocks; interprets the history of development of region or area from field and laboratory investigations; locates structural traps for oil and gas; and defines areas where other mineral deposits might occur.	024.081 018
Systems Analyst Engineering & Scientific	Engineering Analyst I (profess & kin)	020.088 010
Systems Analyst	Mathematical Technician	020.188 022
Technical Information Specialist	Information Scientist	020.088 014
Writer, Technical Publications	Writer, Technical Publications	139.288 014

TECHNICIANS

Key technicians, sometimes without formal professional training, but with long and specialized experience in laboratory work, operating specialized instruments and apparatus required for or developed in the course of these researches; acting as assistants to professional men in such capacities that they may not be replaced by men who have been trained for short periods. This includes personnel of research shops who fabricate highly specialized apparatus and instruments and personnel of research libraries who classify and make available pertinent scientific literature and technology, all of whom make a distinct contribution toward carrying out the research function.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Computer Operator	Digital-Computer Operator	213.382 018
Draftsman	Draftsman, Geological	010.281 018
	Draftsman, Mechanical	007.281 014
	Draftsman, Oil and Gas	017.281 062
Electronic Technician	Electronic Technician	003.181 014
Equipment Designer	Tool Engineer	007.081 070
Instrument Maker	Instrument Maker	729.281 042
Instrument Repairman	Instrument Repairman I (any ind)	710.281 058
Laboratory Technician	Laboratory Assistant I	024.381 010
	Laboratory Tester	029.281 018

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Librarian	Librarian, Reference Library	100.168 030
	Library Assistant	249.368 050
Machinist	Machinist I	600.280 030
Shop Foreman	Shop Foreman	710.131 042
Shop Superintendent	Production Superintendent (any ind)	183.118 014

PETROLEUM REFINING AND MANUFACTURING

DIVISION

KEY OCCUPATIONS IN PETROLEUM
REFINING AND MANUFACTURING DIVISION

GENERAL DESCRIPTION

ACTIVITY

This industry division is composed of establishments primarily engaged in producing gasolines, kerosene, distillate, fuel oils, residual fuel oils, lubricants and other products from crude petroleum, and its fractionation products either through straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking reforming, hydrogen treating, alkylation, polymerization, or other processes.

Physical treatment may involve receiving, storing, blending and compounding, pumping, drumming, packaging, loading and shipping. Steam generation, air compression and water pumping and cooling are involved; electric power may be self-supplied or purchased.

SPECIAL CHARACTERISTICS

A comparatively large bulk liquids continuous-type operation requiring extensive instrumentation and controls.

While yields will vary with such factors as the raw materials used, temperature and pressure conditions, equipment design and choice of catalyst, the continuing processing of crude oil requires the disposition or storage of all hydrocarbon fractions contained.

Oil processes and products require an extensive dependence on science and technology.

ORGANIZATION

Petroleum refining may be organized and conducted in a separate company; in a functional department of an integrated company; in separate refinery establishments.

Research and Development and Technical Services may be organized and conducted in a separate company; in a functional department of a refining or an integrated company; in laboratories, some adjacent to a refinery supplying some services. Patent and Licensing staff are usually part of or closely associated with the R & D organization.

REFINERIES - KEY OCCUPATIONS

ADMINISTRATION

Managers and professionals responsible for planning, coordinating, and directing refining operations and supporting technical and staff service, meeting quantity and quality schedules, maintenance of facilities, industrial security and safety in compliance with regulations and company standards.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Refinery Manager/ Superintendent	Manager, Industrial Organization	189.118 018

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Manager/Superintendent (Operations) (Technical/Engineering) (Administrative/Services)	Manager, Industrial Organization	189.118 018

PROCESS OPERATIONS

Supervisors and experienced, skilled workers concerned with the running of various plant units and controlling flow, temperature, pressure, etc., to obtain optimum quality and quantity yields in line with safe operating procedures. (Occupations generally categorized on basis of operations involved, e.g., light oils, fuels, heavy oils, treating, lubricants, grease, thermal cracking, catalytic cracking, polymerization, crude distillation, hydrogenation, etc.)

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Process/Mfg. Superintendent	Production Superintendent	183.118 014
Department/Division Head (Cracking/Conversion) (Distillation & Treating) (Light Ends) (Lube Processing)	General Foreman	183.168 022
Area/Section Foreman	General Foreman	183.168 022
Unit/Shift Foreman	Foreman, Tower	542.138 010
	Foreman, Treating & Pumping	549.132 022
	Foreman, Natural Gas Plant	541.130 010
	Foreman, Purification	549.138 010
Stillman (Operator No. 1)	Stillman	542.280 010
Gas Plant Operator (Operator No. 1)	Gas Dispatcher	953.168 010
Treater No. 1 (Operator No. 1)	Treater	549.782 026
Refrigeration Engineer (Operator No. 1)	Refrigerating Engineer	950.782 046

OIL MOVEMENTS

Supervisors and skilled workers concerned with crude oil and product transfer, gauging, blending, mixing, loading and unloading tank cars, tank trucks, barges and tankers.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Department/Division Head	Dispatcher, Chief I	184.168 038
Foreman/Supervisor	Wharfinger, Head	184.168 294
	Dispatcher, Oil	914.168 014
Foreman/Supervisor	Foreman, Dock	922.138 014
	Loading Rack Foreman	922.138 018
	Gager, Chief	914.134 010
Pumper	Pumpman II	549.580 010

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Blender	Blender	540.782 014
Cargo Inspector	Cargo Inspector	549.387 010

COMPOUNDING/BLENDING AND PACKAGING

Supervisors and skilled workers involved in blending, compounding, packaging of lube oils, greases, wax, and other specialties, and packaged product storage, shipping, and loading.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Department/Division Head	General Foreman	183.168 022
Foreman/Supervisor	Foreman, Specialty Plant	549.138 014
	Greasemaker, Head	549.132 026
Blender	Blender	540.782 014
Compounder	Compounder	540.782 018
Greasemaker	Greasemaker	540.782 022

UTILITIES AND EFFLUENT DISPOSAL

Professionals and skilled workers concerned with refinery requirements for steam, electricity, water and air, and with the safe disposal of refinery wastes.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Department/Division Head	General Foreman	183.168 022
Foreman/Supervisor	Stationary-Engineer Foreman	950.131 014
Boiler Operator/Engineer (Operator No. 1)	Stationary Engineer	950.782 054
Power Plant Operator/Engineer (Operator No. 1)	Stationary Engineer	950.782 054

MAINTENANCE

Supervisors - professionals or skilled and experienced staff concerned with the maintenance, repair and installation of facilities and equipment. (Foreman generally categorized according to type of work or craft supervised.)

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Manager/Superintendent	Superintendent, Maintenance	189.168 030
Department/Division Head (Planning & Scheduling) (Shops/Crafts) (Construction/Turnarounds) (Zones/Areas)	General Foreman	183.168 022

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Foreman/Supervisor (Shops/Crafts) (Zones/Areas)	Master Mechanic, Maintenance Foreman, Maintenance	638.131 026 899.138 010
Planner	Production Planner	012.188 058

Craftsmen - skilled workers experienced in refinery equipment, working pressures and temperatures, and necessary safety standards and procedures.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Boilermaker No. 1	Boilermaker I	805.281 010
Electrician No. 1	Electrician Lineman	824.281 014 821.281 010
Instrument Man No. 1	Instrument Repairman I	710.281 058
Machinist No. 1 (Shop) (Field)	Machinist I Maintenance Mechanic II Millwright	600.280 030 638.281 020 638.281 034
Maintenance Mechanic	Maintenance Man, Factory or Mill	899.281 018
Pipefitter No. 1	Pipefitter I	862.381 042
Tinner No. 1	Sheet Metal Worker	804.281 010
Welder No. 1	Welder, Combination	812.884 014
Heavy Equipment Operator	Tractor - Crane Operator Truck - Crane Operator	921.883 102 921.883 110

TECHNOLOGY AND ENGINEERING

Professionals or Technicians concerned with process and mechanical engineering, construction and design, drafting, process control and instrumentation, debottlenecking, plant trouble-shooting and developmental work.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Department/Division Head	Chemical Engineer	008.081 014
Supervisory Engineer	Mechanical Engineer	007.081 038
Engineer	Electrical Engineer	003.081 018
(The above industry titles may be filled by persons with any of the opposite <u>Dictionary of Occupational Titles</u> background)	Electronic Engineer Civil Engineer Operations Research Analyst Engineering Analyst	003.081 034 005.081 014 020.088 022 020.088 010
Engineering Technician/ Assistant	Engineering Assistant, Mechanical Equipment Mechanical Engineering Technician Estimator	007.181 022 007.181 026 160.288 018
Inspector	Mechanical Inspector	630.281 030

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES*	
	TITLE	CODE
Draftsman	Draftsman, Oil and Gas	017.281 062
Technical Librarian	Librarian, Reference Library	100.168 030

ANALYTICAL AND CONTROL LABORATORY

Professionals or skilled workers concerned with testing and making analyses of crude oil and products during processing, blending, storage and shipment to insure quality control.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Laboratory Head (Chief Chemist)	Chemical-Laboratory Chief	022.168 010
Chemist	Chemist, Analytical	022.081 014
Lab Foreman/Supervisor	Lab Supervisor	022.168 014
Tester	Tester	029.281 026
	Test-Engine Operator	029.281 022
Lab Technician/Assistant	Pilot Plant Operator	008.380 014

SUPPLY PLANNING AND SCHEDULING

Professionals concerned with the coordination and regulation of refinery operations and inventories in accordance with an integrated supply program; quality control; and yield, cost, and economic evaluations.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Department/Division Head (Crude & Product Coordination) (petrol. production)	Department/Division Head, Crude & Product Coordination Special Definition: Schedules and coordinates refinery feedstock supply; supervises processing of orders, transportation, shipment and accounting of products delivered to customers; forecasts and schedules operations (including blending) to produce optimum product yield and quality; conducts studies of feedstock and of product availability, product development, economics and profitability operations; analyzes refinery and financial performance and relates this to operations and capital investment budgeting; studies economic effects of changing raw material sources; establishes detailed product processing costs for use in capital investment studies; develops needs and incentives for capital investments such as product storage facilities.	169.188 012
Engineer	Chemical Engineer	008.081 014
Product Coordinator	Production Planner	012.188 058
Traffic Agent	Manager, Traffic (any ind)	184.168 094
Section Supervisor	Order Dept. Supervisor	169.168 066

REFINERY SERVICES

Professionals or skilled and experienced staff employees providing administrative and specialized services not otherwise performed by central and other principal offices.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
<u>BUSINESS/PLANT SERVICES</u>		
Manager/Supervisor (Accounting) (Office)	Accountant	160.188 010
	Manager, Office	169.168 062
Accountant	Accountant	160.188 010
Manager/Supervisor (Computer Services)	Manager, Electronic Data Processing	169.168 058
Analyst/Specialist (Systems)	Systems Analyst, Business Electronic Data Processing	012.168 022
Computer Programmer	Programer, Business	020.188 026
	Programer, Engineering and Scientific	020.188 030
Computer Operator	Digital Computer Operator	213.382 018
Plant Protection Supervisor	Superintendent, Plant Protection	189.168 034
Planning Clerk	Statistical Clerk	219.388 258
Plant Physician	Physician, Occupational	070.108 070
Nurse	Nurse, General Duty	075.378 014
<u>EMPLOYEE RELATIONS</u>		
Manager, Employee Relations	Manager Personnel	166.118 022
Supervisor/Specialist Labor Relations	Labor Relations Specialist	169.118 022
	Salary & Wage Administrator	169.118 026
Salary & Wage	Salary & Wage Administrator	169.118 026
Employment Benefits	Manager, Employment Benefits-and-Service-Records Supervisor	166.168 026
	Supervisor	166.168 010
Training Safety	Director, Educational	166.118 010
	Director, Safety	166.118 018
<u>STORES</u>		
Manager/Department Head (Materials/Stores)	Manager, Warehouse	184.168 114
Materials Supervisor	Supervisor, Stock	223.138 038
Materials Analyst	Material Coordinator	221.168 010
	Material Clerk	223.387 042
<u>PURCHASING</u>		
Manager, Purchasing	Supervisor, Procurement Services	162.168 026

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Purchasing Coordinator	Purchasing Agent	162.158 102
Buyer	Purchasing Agent	162.158 102

RESEARCH AND TECHNICAL SERVICES - KEY OCCUPATIONS

This organization conducts basic and applied research and performs related technical services to define and develop new or improved products, processes, and investment opportunities.

ADMINISTRATION

Professionals concerned with the implementation of R & D programs, budgets and related administrative functions; who participate in the setting of research objectives; who coordinate professional advice and the exchange of technical information to and from operating management.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
General Manager/Director	Director, Research & Development	189.118 014
Manager/Director	Director, Research & Development	189.118 014
(Process Research)	Chemical - Laboratory Chief	022.168 010
(Product Research)		
(Basic Research)		
(Research Services)		

PROFESSIONALS

Professionals of varied science and engineering disciplines responsible for and concerned with the direct conduct of Research & Development work, either individually or in teams, depending on the research problems and phases of the problems as well as individual traits and capabilities; also concerned with the generation of research proposals, the evaluation of technical merit and promise, and the continuing consultation and two-way flow of information with other research groups and the operating users of the Research & Development results.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Research Chemist	Chemist, Organic	022.081 042
	Chemist, Analytical	022.081 014
	Chemist, Inorganic	022.081 034
	Chemist, Physical	022.081 046
Research Engineer	Chemical Engineer	008.081 014
	Mechanical Engineer	007.081 038
	Electrical Engineer	003.081 018
	Electronic Engineer	003.081 034
	Operations-Research Analyst	020.088 022
Systems Analyst	Engineering Analyst I	020.088 010
Physicist	Physicist	023.081 010
Mathematician	Mathematician	020.088 018

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES.	
	TITLE	CODE
Librarian	Librarian, Reference Library	100.168 030
Library Assistant	Library Assistant	249.368 050

TECHNICIANS AND CRAFTS

Semi-professionals or skilled workers who work directly with scientists and engineers, or are part of support units to such professionals.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Boilermaker No. 1	Boilermaker I	805.281 010
Electrician No. 1	Electrician	824.281 014
Glassblower	Glassblower Laboratory Apparatus	772.281 010
Instrument Technician	Instrument Repairman I	710.281 058
Lab Foreman	Laboratory Supervisor	022.168 014
Machinist No. 1	Machinist I (mach. shop)	600.280 030
	Maintenance Mechanic II	638.281 022
	Millwright	638.281 034
Maintenance Foreman	Master Mechanic, Maintenance	638.131 026
Pipefitter No. 1	Pipefitter I	862.381 042
Research Technician	Chemical-Laboratory Technician	022.281 014
	Pilot Plant Operator	008.380 014
	Mechanical Engineering Technician	007.181 026
	Instrumentation Technician	003.281 026
Electronic Technician	Electronic Technician	003.181 014
Tinner No. 1	Sheet Metal Worker	804.281 010
Welder No. 1	Welder, Combination	812.884 014

PATENTS AND LICENSING

Professionals concerned with recognizing patentable ideas or concepts in research results, exploring limitations, developing patent position, preparing and prosecuting applications, handling patent office actions and exploiting patent assets through licensing and cross-licensing agreements.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Patent Attorney	Lawyer, Patent	110.118 030
Patent Agent	Patent Agent	119.168 014
Patent Librarian	Librarian, Reference Library	100.168 030
Patent Searcher	Law Clerk	119.288 014
Translator	Translator, Scientific Documents	137.288 030

PETROLEUM SUPPLY AND TRANSPORTATION
DIVISION

KEY OCCUPATIONS IN PETROLEUM SUPPLY
AND TRANSPORTATION DIVISION

GENERAL DESCRIPTION

ACTIVITY

This industry division is composed of establishments primarily engaged in moving large daily quantities of crude oil, hydrocarbon volatiles, natural gas and finished products over long distances that often separate producing, refining, terminal storage and consuming centers. Tankers, barges, pipelines and road or rail vehicles are used.

Transport of materials and personnel are also a significant part of this general activity, being handled by both company-owned and contract equipment.

SPECIAL CHARACTERISTICS

Owing to their physical nature, oil and gas require special arrangements for their transport in tankers, barges, pipelines and road or rail vehicles, some of which have to bear the disadvantage of lack of alternative uses and empty return journeys. Storage presents greater problems than that of most other commodities including control and prevention of storage and in-transit losses.

Shipments must be scheduled ahead, checked and revised regularly to insure adequate transportation in compliance with Government and company regulations.

It should be noted that national emergency conditions may greatly affect transportation activities. For example, emergency conditions may require increased rates of operation, major revisions such as reversal of flow direction, dismantling and rebuilding facilities, conversion to other uses, transportation of new and different materials, integration of various owner's facilities into single systems and extension to new areas. These accentuate the need for personnel with technical training and especially for those with long experience which gives them knowledge of intricate equipment and operating systems.

ORGANIZATION

This industry division's activities may be organized and conducted in a separate company, large or small; in a functional department of an integrated company; in geographical establishments and operating units.

The activities have been classified in five general categories, namely: Marine, Oil Pipe Lines, Gas Transmission Lines, Air-Rail-Truck Traffic, and Supply.

MARINE TRANSPORTATION - KEY OCCUPATIONS

The transportation of petroleum, its products and derivatives and chemicals by tankers and barges on ocean and inland waterways. This activity requires men who have consistently demonstrated good judgment based on their comprehensive knowledge of port conditions; bunkering facilities; supply points; safe work practices; Government regulations; ship operations including elements of navigation, docking, pilotage, loading, unloading, tank cleaning, ballasting, crewing and victualling. The competencies can be acquired only through adequate training and significant experience.

SCHEDULING AND OPERATING

The planning, coordinating, scheduling, chartering and directing shipments of petroleum; its products and derivatives and chemicals to and from refineries and marine terminals, procuring tonnage needed to supplement long-term contract coverage of requirements; and estimating demand and evaluating performance by the carriers.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE *
Transportation Manager	Manager, Operations	184.118 042
Marine Manager	Superintendent, Marine	184.168 186
Operations Coordinator/ Manager/Supervisor	Float Master	184.168 050
Transportation Allocator	Float Master	184.168 050
Senior Analyst	Manager, Traffic	184.168 098
Economic Analyst	Industrial Economist	050.088 022

TECHNICAL

Designing of tugs, barges and ships for inland and/or salt water traffic.
Preparing specifications, issuing bid invitations, supervising construction.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Technical Superintendent	Architect, Marine	001.081 014
Naval Architect & Marine Engineer	Marine Engineer	014.081 010
	Marine Engineer	014.187 010
Marine Designer	Draftsman, Marine	014.281 018
Marine Construction Inspector	Construction Inspector (any ind) <u>Special Additional Definition</u> - Works under the supervision of Marine Engineer to perform some type of duties normally performed under <u>Dictionary of Occupational Titles</u> title of Construction Inspector (const.) for the construction of marine vessels. There is no suffix code in the <u>Dictionary of Occupational Titles</u> for this specialty.	182.287 014

MARINE REPAIR

Repairs and maintains fleet. Writes procedures, and schedules and inspects routine maintenance.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Repair Superintendent	Superintendent, Maintenance (any ind)	189.168 030
Marine Repair Inspector	Construction Inspector (any ind) <u>Special Additional Definition</u> - Performs same types of duties as Superintendent and Construction Inspector (any ind) except for marine vessels, for which there is no <u>Dictionary of Occupational Titles</u> suffix code.	182.287 014
Electronic Specialist	Electronics Mechanic (any ind)	828.281 022

PORT OPERATIONS

Men directly engaged in superintending the loading and discharging of cargoes, or in expedition turnaround of tankers and barges in ports. The hazards involved and the coordination of activities necessary to avoid delays require experienced men.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Port Captains	Superintendent, Marine	184.168 186
Port Engineers	Port Engineer	014.187 014
Port Stewards	Steward, Port	169.118 030
Port Dispatchers	Float Master	184.168 050
Transportation Allocator	Float Master	184.168 050

INLAND WATERWAYS AND SALT WATER SHIPPING

Qualified officers and men who man tankers, tugs and barges operating in inland waters and who hold documents and/or licenses issued by the U.S. Coast Guard for ratings above Ordinary Seaman, Wiper or Messman.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Bargeman	Deckhand	911.887 022
Boatswain	Boatswain	911.131 010
Captain	Master, Ship	197.168 026
Captain	Tugboat Captain	197.133 030
Chief Mate	Mate, Ship	197.133 022
Cook	Cook, Chief (water trans.)	315.131 010
Deckhand	Deckhand	911.887 022
Electrician	Electrician (ship & boat)	825.381 030
Engineer	Engineer (water trans.) (Engineer Chief) (Engineer First Assistant) (Engineer Second Assistant) (Engineer Third Assistant)	197.130 014
Machinist	Engineer	197.130 014
Master	Master, Riverboat	197.168 022
Pumpman	Pumpman (any ind)	914.885 018
Radio Officer	Radio Officer	193.282 022
Seaman (Able Bodied)	Able Seaman	911.884 010
Second Mate	Mate, Ship	197.133 022
Steward	Steward, Chief, Passenger Ship	350.138 018
Tankerman	Deckhand	911.887 022
Third Mate	Mate, Ship	197.133 022

OIL & PRODUCTS PIPE LINE TRANSPORTATION KEY OCCUPATIONS

Pipe line transportation of crude oil and LPG from production area and natural gasoline plants to refineries or to terminals for trans-shipment to tankers, barges, tank cars and trucks, and the transportation of refined petroleum products from refineries to bulk terminals or from ship and barge terminals to distribution centers. This activity requires men who are knowledgeable of pipe line systems and their operation and maintenance; characteristics of the material transported and stored and maintenance of its "quality integrity"; and safe and proper work practices in compliance with regulations and public/land owner welfare.

ENGINEERING

Professionals - men who implement the technical phases of design, construction, maintenance and operation of pipe line gathering, truck line transportation, storage and delivery systems and equipment.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Civil Engineer	Civil Engineer	005.081 014
Corrosion Engineer	Electrolysis-and-Corrosion- Control Engineer (profess & kin)	003.187 030
Chief Draftsman	Draftsman, Head	Note 1
Draftsman	Draftsman, Structural	005.281 018
	Draftsman, Civil	005.281 014
	Draftsman, Electrical	003.281 010
	Draftsman, Electronic	003.281 014
	Draftsman, Map	017.281 058
	Draftsman, Mechanical	007.281 014
Electrical Engineer	Electrical Engineer	003.081 018
Head Chainman	Chainman (any ind)	018.687 010
Instrument Man	Instrument Man (profess & kin)	018.188 014
Mechanical Engineer	Mechanical Engineer	007.081 038
Surveyor (Party Chief)	Surveyor	018.188 026

SUPERINTENDENCE

Professionals or experienced men who are responsible for the control and coordination of all system activities within jurisdiction, and in relation to established schedules, overall policies and practices.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Area/District Engineer	Engineer, Chief (a supervising engineer responsible for an assigned part of a pipe line system)	010.168 010

Note 1: Codes of Head Draftsmen are same as those of the draftsmen they supervise.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Area/District/Division Superintendent/Manager	Superintendent, Pipe Lines	184.168 198

CONSTRUCTION, MAINTENANCE, AND REPAIR

Responsibility for construction, maintenance and repair of pipe lines, tanks, terminals, pumping stations and related facilities to comply with specifications. For maintenance and repair must know location of lines and general history and conditions of lines and related facilities.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Aircraft Patrol Pilot	Airplane Patrol Pilot	196.283 022
Aircraft Mechanic	Aircraft-and-Engine Mechanic	621.281 010
Pipe Line Foreman (Construction)	Foreman, Pipe Lines	862.131 010
Carpenter	Carpenter Foreman	860.131 018
Painter	Painter Foreman	840.131 010
Maintenance	Foreman, Pipe Line Maintenance	914.138 010
Maintenance and Construc- tion	Foreman, Maintenance and Construction	869.138 010
Mechanical	Mechanical-Maintenance-Man Foreman	638.131 030
Gang	Foreman, Labor Gang	899.133 010
Pipe Line Construction Inspector	Pipe Line Construction Inspector	869.387 010
Work-Equipment Operator	Power-Shovel Operator	850.883 030
	Dragline Operator	859.883 018
	Trench-Digging-Machine Operator	850.883 054
	Operating Engineer	859.883 030
Welder Foreman	Welder Foreman, Pipe Line	810.131 010
Truck Driver, Heavy Duty	Truck Driver, Heavy	905.883 022
Welder	Welder, Gas	811.884 014
	Welder, Arc	810.884 018
Meter Mechanic	Meter Repairman	710.281 066
Mechanic	Mechanical-Maintenance Man	620.281 074
Instrument Repairman	Instrument Repairman	710.281 058
Electrician	Electrician	824.281 014
Maintenance Mechanic	Maintenance Mechanic II	638.281 022
Pipeliners	Pipeliners	899.884 038

COMMUNICATIONS

Responsible for installation and maintenance of communications system which consists of automatic controls and sequence operation devices as well as transmission of intelligence for remote control of operations. This system may be any one or a combination of telephone and teletype, microwave and radio circuits.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Communications and Electrical Foreman	Line Foreman (tel. & tel.)	822.131 014
	Shop Foreman	710.131 042
Communications Engineer	Electronic Engineer	003.081 034
Electrician	Electrician, Radio	823.281 014
Electronics Technician	Electronics Mechanic	828.281 022
Lineman	Lineman	821.281 010
Radio Technician	Communications Man	822.281 026
	Radio Repairman	720.281 010

RIGHT-OF-WAY AND CLAIMS

Responsibility for obtaining right-of-way for pipe line installation, purchasing of land and settling claims for damages resulting from construction and operation of pipe lines.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Right-of-way and Claims Agent	Right-of-way Agent	191.118 050

OIL AND PRODUCTS MOVEMENT, STORAGE, AND DISPATCHING

Responsibility for the coordination in pipe line transportation of crude oil, LPG and products. Directs the operation of pipe lines through exacting allocation of space in pumping schedules and storage facilities for shipments of oil of various grades from wells and storage tanks to refineries and marine terminals. Similar responsibilities apply to the movement of LPG from natural gasoline plants and products from refineries to storage and distribution centers.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Chief Dispatcher	Dispatcher, Chief I	184.168 038
Dispatcher	Dispatcher, Relay	914.368 010
Scheduler	Dispatcher, Oil	914.168 014

PUMPING STATION OPERATIONS

Responsibility for the efficient operation of pump stations and related equipment located at intervals along crude oil, LPG, and products pipe lines.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE*
Station Superintendent	Station Engineer, Chief	914.132 014
	Stationary Engineer Foreman	950.131 014
Station Attendant or Operator	Station Engineer, Main Line	914.782 018
	Stationary Engineer	950.782 054

TERMINAL AND TANK FARM OPERATIONS

Responsibility for delivery of crude oil, LPG, and products from pipe lines to terminals; its measurement, storage, specification control and delivery to refineries, marine terminals, tank cars, tank trucks or distribution locations.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Terminal Superintendent or Foreman	Superintendent, Terminal	184.168 222
Chief Deliveryman	Foreman, Field Pipe Lines	914.131 010
Terminal Man	Gager	914.381 010
Tester (Laboratory)	Tester (petrol. refin.)	029.281 026

CRUDE OIL, LPG AND PRODUCTS MEASUREMENT

Responsibility for pipe line runs of crude oil from leases or LPG and products from storage for most efficient use of system. Performs tests to determine basic sediments, water and other contaminants to insure compliance with specifications. Gauges or measures for quantity of crude oil, LPG or products with acceptable accuracy for compliance with regulations of government agencies relative to proration and other specifications.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Chief Gauger	Gager, Chief (petrol. prod.; petrol. refin.; pipe lines)	914.134 010
Gauger	Gager (petrol. prod.; refin.; pipe line)	914.381 010

NATURAL GAS TRANSMISSION PIPE LINES KEY OCCUPATIONS (SEE NOTE)

Natural gas transmission companies own, construct, and operate long distance, high-pressure pipe lines for the gathering of natural gas from producing areas and transmission to consuming areas, where it is sold to local public utility companies for distribution to individual customers or is sold directly to industrial customers.

NOTE: Key occupations in central and other principal offices, gas processing, and exploration and production activities of gas transmission companies are covered in other specific sections.

Compressor stations and processing facilities are located at intervals along the pipelines to maintain necessary pressures and control quality. To help minimize seasonal variations in gas demand, many natural gas transmission companies also maintain underground reservoirs where gas is stored during the summer for withdrawal during the peak-demand winter months.

Some key occupations beyond City Gate are also listed.

GAS SUPPLY

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Sr. Draftsman and/or Draftsman	Draftsman, Geological	010.281 018
Field Representative	Scout	010.288 026
Gas Buyer or Gas Contract Representative	Manager, Contracts Alternate title: Supply Representative, Dry Gas	163.118 014
Regional Reserves and Availability Engineer	Engineer, Chief	010.168 010
Reserves Supply or Development Geologist	Geologist, Petroleum	024.081 022
Reservoir or Reserves and Availability Engineer	Petroleum Engineer <u>Special Additional Definition</u> - Studies and evaluates data on history of individual wells, subsurface pressure surveys, known or anticipated characteristics of formations, core analysis, electrical formation surveys, etc., to aid in forecasting calculated potential of oil and gas recovery from individual reservoirs, estimating the natural flow life of wells and evaluating the producing possibilities of oil and gas-bearing formations found in individual wells.	010.081 022
Jr. Well Test Engineer	Technical Operator	930.188 014
Well Test Engineer or Gas Engineer	Petroleum Engineer	010.081 022
Well Tester	Bottom-Hole-Pressure-Recording Operator	930.188 010

PIPELINE OPERATIONS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
District Pipeline Superintendent	Superintendent, Compressor Station	184.168 150
Crew Foreman or Maintenance Foreman	Foreman, Pipe-Line-Maintenance	914.138 010
District Clerk, Senior	Clerk, General Office	219.388 066
Heavy Equipment Operator	Tractor-Crane Operator Bulldozer Operator I	921.883 102 850.883 010

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Station Attendant or Field Dispatcher	Stationary Engineer	950.782 054
Truck Driver Foreman	Truck Foreman (motor trans.)	909.137 014
Truck Driver, Heavy Duty	Truck Driver, Heavy	905.883 022
Welder	Welder, Gas	811.884 014
	Welder, Arc	810.884 018
Well Operator	Gasman	549.782 018

COMPRESSOR OPERATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Auxiliary Operator	Stationary Engineer	950.782 054
Compressor Operator	Gas-Compressor Operator	950.782 030
Compressor Station Repairman	Repairman I (chem.)	630.281 050
Electrician	Electrical Repairman	829.281 022
Field Clerk, Senior	Chief Clerk II (any ind)	169.168 026
Machinist	Machinist I (mach. shop)	600.280 030
Maintenance Mechanic	Master Mechanic, Maintenance	638.131 026
Shift Foreman	Compressor-Station Engineer, Chief (pipe lines)	914.132 010
Station or Plant Superintendent	Compressor-Station Engineer, Chief (pipe lines)	914.132 010
District Superintendent	Superintendent, Compressor Stations	184.168 150

UNDERGROUND STORAGE

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Chief Storage Engineer	Engineer, Chief	010.168 010
Driller	Rotary Driller	930.782 054
Geologist	Geologist, Petroleum	024.081 022
Instrument Repairman	Instrument Repairman I	710.281 058
Senior Operator	Gasman	549.782 018
Storage Field Technician	Technical Assistant	
Well Superintendent	Gasman, Head	549.131 010

DISPATCHING

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Chief Dispatcher	Dispatcher, Chief II	914.168 010
Dispatcher or Assistant Dispatcher	Gas Dispatcher	953.168 010
Well Operation Coordinator	Dispatcher, Chief I	184.168 038

MEASUREMENT

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Chart Clerk	Planimeter Operator	219.388 194
	Chart Clerk	219.388 046
Instrument Technician	Gasman	549.782 018
Meter Repairman	Instrument Repairman I	710.281 058
Meter Repairman	Meter Inspector	710.384 014
Measurement Specialist	Gasman, Head	549.131 010
Measurement Supervisor	Superintendent, Measurement	184.168 190
Supervisor, Chart Processing	Chief Clerk, Measurement Dept.	229.138 018
Supervisor, Gas Sales or Purchase	Chart Clerk, Chief	229.138 014

COMMUNICATIONS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Communications and Electrical Superintendent	Superintendent, Communications	184.118 070
Communications and Electrical Foreman	Line Foreman	822.131 014
Communications Engineer	Electrical Engineer	003.081 018
Communications and Electrical Technician	Communications Man	822.281 026
Lineman	Lineman	821.281 010
Radio Repairman	Electrician, Radio	823.281 014
Radio Repairman	Radio Repairman	720.281 010
Radio Towerman	Rigger (tel. and tel.)	823.281 038

RIGHT-OF-WAY AND CLAIMS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Area or District Landman or Right-of-Way Specialist	Claim Man	119.168 010
Right-of-Way and Claims Agent	Right-of-Way Agent	191.118 050
Supervisor, Clerical Services	Chief Clerk II	169.168 026

INSIDE CITY GATE

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Dispatcher	Gas Dispatcher	953.168 010
Gas Engineer	Gas Distribution Engineer	007.187 014
Manager	Manager, Utility Sales and Services	163.168 018
Meter Reader	Meter Reader	239.588 018
Meter Reader, Chief	Meter Reader, Chief	239.138 026
Repairman	Gas-Equipment-and-Control Man	637.281 026
	Gas-Governor Repairman	710.781 014
	Gas-Meter Installer	953.884 014
	Gas-Meter Inspector	710.381 030
	Gas-Meter Repairman	710.281 030
Repair Foreman	Meter-and-Regulator-Shop Foreman	710.131 030
	Gas-Meter-Repairman Foreman	710.131 014

AIR-RAIL-TRUCK TRAFFIC - KEY OCCUPATIONS

The traffic function is concerned with planning and directing the movement of crude oil, its products and derivatives as well as personnel and materials by air, rail and truck (inter-city) transport via company owned or leased equipment and contract or common carriers. Intra-city truck deliveries may be involved but generally these movements by company fleet or contract carrier are part of Oil Distribution.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Aircraft Co-pilot	Airplane Pilot, Commercial	196.283 014
Aircraft Dispatcher	Dispatcher (air trans.)	912.168 010
Aircraft Engineer	Flight Engineer	621.281 038
Aircraft Mechanic	Aircraft-and-Engine Mechanic	621.281 010
Aircraft Pilot	Airplane Pilot, Commercial	196.283 014
Helicopter Pilot	Helicopter Pilot	196.283 034

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Supervisor (Tank Cars)	Train Dispatcher	184.168 270
Supervisor (Motor Transport)	Superintendent, Transportation	184.168 234
Supervisor (Tariffs and Rates)	Rate Supervisor	222.138 022
Supervisor (Passenger Traffic)	Ticket Agent	919.368 014
Tank Car Inspector	Car Inspector (petrol. refin.)	910.684 010
Tank Car Repairman	Carman	622.381 014

SUPPLY - KEY OCCUPATIONS

Additional titles in Supply may also duplicate titles found in Distribution and Marketing Division, pages 43 and 44; in Refining and Manufacturing Division, page 27.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Manager/Supervisor (Supply Programming) (petrol. production)	Manager/Supervisor, Supply Programming <u>Special Definition:</u> Responsible for optimizing economic disposition of oil supplies; coordinates a logical development of the Supply System between the Production, Refining, Transportation and Marketing function incorporating optimum coordination of capital investments and business arrangements; develops a short-term operating program making use of operations in company owned facilities and outside business transactions to maximize profits while maintaining a supply/demand balance; analyzes variations from the operating program and makes revisions; evaluates spot business arrangements; develops major bids for product sales; makes raw material trade balances; analyzes day-to-day supply/demand to maximize profits; participates in long-range planning of corporate operating investments; evaluates capital budgets and long-term business arrangements involving the supply system; develops raw material pricing strategy; develops advanced quantitative techniques and methods for supply system planning such as computer application, linear programming and information systems.	169.188 013
Business Environment Analyst	Market-Research Analyst	050.088 034
Commerce Manager	Manager, Contracts	163.118 014
Operating Program Analyst	Operations-Research Analyst	020.088 022
Program and Logistics Analyst	Production Planner	012.188 058
Supply System Planning Analyst	Industrial Economist	050.088 022
Traffic Manager	Manager, Traffic	184.168 094

PETROLEUM DISTRIBUTION AND MARKETING

DIVISION

KEY OCCUPATIONS IN
PETROLEUM DISTRIBUTION AND MARKETING DIVISION

GENERAL DESCRIPTION

ACTIVITY

This industry division is composed of establishments primarily engaged in the receipt of petroleum products and LPG in large quantities by tank car, truck, pipe line, tanker or barge - and the delivery to consumers and resellers including service stations. The activity is mainly wholesale trade and includes required supporting sales and technical services on development, implementation, and analysis of distribution systems, product sources and applications, performance standards, operations training, automation and computer systems, inventory management, and associated capital expense budgets.

Bulk plants and terminals in which these products are stored are located close to consuming centers; included are tanks, unloading and loading facilities, truck transport units, drum and package warehouses. Many have blending and drumming and canning operations and control-testing laboratories, occupations for which are not listed in this section, but are included in Refining and Manufacturing Division.

SPECIAL CHARACTERISTICS

Storage, handling, and delivery of petroleum products and LPG are subject to federal, state, and local safety and fire regulations.

Maintenance of quality controls and "product integrity" is required throughout distribution activity and for hundreds of products to insure safe and proper performance of the delivered products.

ORGANIZATION

This industry division's activities may be organized and conducted in a separate company with one or more plant or terminal units; in a functional department of an integrated company; in geographical regions, areas, divisions, districts, zones, and in plant or terminal establishments.

PRODUCTS SUPPLY AND PERFORMANCE

Experienced staff concerned with product performance and the continuity of product supplies into bulk plants and terminals and the level of inventories carried and needed to meet forecast demand requirements, and as may be affected by season, transportation capabilities, and emergency situations.

Provides research and evaluations on products and business line. Provides basic market and consumer research studies. Studies market variables supply programs distribution and operating systems, and pricing; and forecasts product demands.

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Manager/Supervisor (Technical Service)	Manager, Technical Service	189.268 014

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Manager/Supervisor (Supply Programming) (petrol. production)	Manager/Supervisor, Supply Programming Special Definition: Responsible for optimizing economic disposition of oil supplies; coordinates a logical development of the Supply System between the Production, Refining, Transportation and Marketing function incorporating optimum coordination of capital investments and business arrangements; develops a short-term operating program making use of operations in company owned facilities and outside business transactions to maximize profits while maintaining a supply/demand balance; analyzes variations from the operating program and makes revisions; evaluates spot business arrangements; develops major bids for product sales; makes raw material trade balances; analyzes day-to-day supply/demand to maximize profits; participates in long-range planning of corporate operating investments; evaluates capital budgets and long-term business arrangements involving the supply system; develops raw material pricing strategy; develops advanced quantitative techniques and methods for supply system planning such as computer application, linear programming and information systems.	169.188 013
Cost & Financial Analyst	Mathematician	020.088 018
Distribution System Research Analyst	Operations-Research Analyst	020.088 022
Marketing Analyst	Market-Research Analyst	050.088 034
Operations Research Analyst	Operations-Research Analyst	020.088 022
Pricing Research Analyst	Price Economist	050.088 038
Services Coordinator	Dispatcher, Chief I	184.168 038
Supply Specialist	Industrial Economist	050.088 022
Systems Analyst	Systems Analyst, Business - Electronic-Data Processing	012.168 022
Systems Analyst	Mathematical Technician	020.188 022
Traffic Specialist	Manager, Traffic	184.168 094

TECHNICAL AND FIELD REPRESENTATIVES

Professionals concerned with proper bulk plant and terminal operations and maintenance, with product applications and performance, and with budgeting, design, procurement, and maintenance of automotive fleet.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Manager, Terminal	Manager, Bulk Plant Special Additional Definition - Responsible for the operation of a number of bulk plants,	181.118 010

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
	terminals, and warehouses within a specified geographical area. Directs and supervises personnel in the receipt, storage, handling, and delivery of products.	
Operations Supervisor, Terminal Operations Coordinator	Manager, Bulk Plant	181.118 010
Automotive Coordinator	Automotive Engineer (auto mfg.)	007.081 014
Automotive Maintenance Coordinator	Automobile Mechanic, Chief (auto ser.)	620.131 010
Construction & Maintenance Engineer	Civil Engineer	005.081 014
Facilities Planning Engineer	Electrical Engineer	003.081 018
Field Engineer	Electronic Engineer	003.081 034
Field Service Engineer	Mechanical Engineer	007.081 038
Operations Engineer		
Operations & Engineering Systems & Development Coordinator		
Systems Development Engineer		

(The seven above industry titles may be filled by persons with any of the four Dictionary of Occupational Titles listed above.)

BULK PLANTS AND TERMINALS

Supervisors and skilled workers responsible for receipt, physical control and storage delivery, and servicing, and meeting all requirements in connection with public health and safety.

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Bulk Plant and Terminal Superintendent	Manager, Bulk Plant	181.118 010
Bulk Plant and Terminal Supervisor	Receiving-and-Shipping Foreman	223.138 022
Delivery (Dray) Truck Operator	Truck Driver, Light	906.883 026
Loaned Delivery Equipment Mechanic	Maintenance Mechanic II	638.281 022
Maintenance Mechanic	Maintenance Mechanic II	638.281 022
Stationary Engineer	Stationary Engineer	950.782 054
Truck Mechanic	Automobile Mechanic	620.281 014
Truck Dispatcher	Dispatcher, Motor Vehicle	919.168 010
Heavy Truck Operator	Tank-Truck Driver	903.883 014
Warehouse Supervisor	Receiving-and-Shipping Foreman	223.138 022

GAS DISTRIBUTION INDUSTRY

OCCUPATIONS IN THE GAS DISTRIBUTION INDUSTRY

Gas Distribution companies operating within the city gates vary widely in size--from two (2) to over five thousand (5,000) employees. Accordingly, there is a good deal of variability in organization.

The larger companies tend toward organization structures which are similar to those found in the American manufacturing industry. With decreasing company size, there is an increased tendency toward multi-function departments and a greater degree of subcontracting of maintenance, repair, installation and new construction.

It is most suitable in this industry, therefore, to segregate occupations in terms of four (4) major functions.

- (a) Executive
- (b) Finance and General Administration
- (c) Engineering
- (d) Operations

EXECUTIVE FUNCTIONS

Include those typically associated with boards of directors and company officers; specifically those concerned with the establishment of business objectives, the guidance of company activities toward these goals, and the formulation and implementation of general policies. Major responsibility for relationships with community and government agencies, stockholders, and the financial community is found in this group. Auditing and legal staffs provide specialized services.

EXECUTIVE MANAGEMENT OPERATIONS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Controller	Controller	186.118 014
Corporate Secretary	Administrative Secretary	169.168 018
President	President	189.118 022
	Manager Industrial Organization	189.118 018
Treasurer	Treasurer	161.118 018
Vice President	Vice President	189.118 026

EXECUTIVE PROFESSIONAL OCCUPATIONS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Attorney	Lawyer, Corporation	110.118 026
	Tax Attorney	110.118 046
Auditor, Corporate	Auditor	160.188 038

FINANCE AND GENERAL ADMINISTRATIVE FUNCTIONS

Include those typically associated with financial and accounting departments, public and customer relations, marketing and sales, and administrative support activities such as payroll, data processing, transportation, office services and employee relations. Larger companies include customer application engineers and home service specialists in their general administrative offices.

GENERAL ADMINISTRATION & FINANCE MANAGEMENT OCCUPATIONS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Manager, Computer Operations	Supv., Computer Operations	213.138 010
Manager, Corporate Insurance	Manager, Insurance	186.118 030
Manager, Customer Accounting	Supv., Accounts Receivable	219.138 038
Manager, Data Processing	Manager, Electronic Data Processing	169.168 058
Manager, Employee Benefits	Benefits & Service Records Administrator	166.168 010
Manager, Employee Benefits Accounting	Actuary	020.188 010
Manager, Employee Relations	Director, Industrial Relations	166.118 014
Manager, Employment	Director of Placement	166.168 022
	Manager, Employment	166.168 026
Manager, Office Services	Manager, Office	169.168 062
Manager, Payroll	Superintendent, Payroll Division	219.138 034
Manager, Programming	Project Director - Business Data Processing	020.168 010
Manager, Purchasing	Purchasing Agent	162.158 102
	Supv. Procurement Services	162.168 026
Manager, Safety	Safety Engineer	012.081 010
Manager, Tabulating	Supv., Machine Records Unit	213.138 010
	Accountant, Machine Processing	160.188 022
Manager, Training	Supervisor, Training	166.228 018
Manager, Transportation	Supt. Transportation Services	184.168 234
Manager, Wage & Salary	Salary & Wage Administrator	169.118 026

GENERAL ADMINISTRATION & FINANCE PROFESSIONAL OCCUPATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Accountant/Analyst	Accountant	160.188 010
	Accountant, Property	160.188 026
	Accountant, Tax	160.188 034
	Accountant, Cost	160.188 018
	Accountant, Budget	160.188 014
Auditor	Auditor	160.188 038
	Auditor, Internal	160.188 042
Company Pilot	Executive Pilot	196.283 026
Depreciation Engineer	Valuation Engineer	161.188 014
Economist	Economist	050.088 014
Financial Analyst	Financial Analyst	020.188 018
Heating and Air Conditioning Engineer	Air Conditioning Engineer	007.081 010
Interviewer/Recruiter	Personnel Recruiter	166.268 030
	Employment Interviewer	166.268 018
Job Analyst	Job Analyst	166.268 030
Labor Relations Man	Labor Relations Specialist	169.118 022
Methods and Procedures Analyst	Accountant, Systems	160.188 030
Physician	General Practitioner	070.108 026
Programmer	Programmer, Business	020.188 026
Rate Engineer	Rate Engineer	161.188 010
Sales Representative	Salesman - Public Utilities	257.358 010
	Salesman - Gas Appliances	278.358 010
Statistician	Statistician, Business	020.188 042
Systems Analyst	Systems Analyst Business	012.168 022
	Electronic Data Proc.	
Training Instructor	Training Representative	166.228 022

GENERAL ADMINISTRATION & FINANCE TECHNICIAN OCCUPATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Aircraft Mechanic	Aircraft Engine Mechanic - Line Service	621.281 014
Computer Operator	Digital Computer Operator	213.382 018
Nurse	Nurse, Office	075.378 018
Tabulation Machine Operator, Sr.	Tab Machine Operator	213.782 010

ENGINEERING FUNCTIONS

Are responsible for the development and design of capital facilities and the maintenance of optimum conditions with respect to operational efficiency, product standards and safety. Engineering specialties emphasized in gas distribution include welding and corrosion engineering, and distribution engineering, the latter referring to the design of distribution networks which match community demands to operating facilities. Engineering economic studies are typical of this group. Because of specialized knowledge, engineering departments are frequently used as resource groups in solving more complex customer utilization problems.

ENGINEERING MANAGEMENT OCCUPATIONS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Mgr. Drafting	Draftsman, Chief, Design	017.168 010
	Supv. Estimators & Draftsmen	019.168 010

ENGINEERING PROFESSIONAL OCCUPATIONS

<u>INDUSTRY TITLE</u>	<u>DICTIONARY OF OCCUPATIONAL TITLES</u>	
	<u>TITLE</u>	<u>CODE</u>
Chemist	Chemist, Analytical	022.081 014
Engineer - Automation	Measurement and Control Engineer	008.081 034
Engineer - Buildings	Construction Engineer	005.081 018
Engineer - Corrosion	Electrolysis and Corrosion Engineer	003.187 030
Engineer - Communications	Communication Engineer	822.281 022
Engineer - Design	Mechanical Engineer	007.081 038
	Electrical Engineer	003.081 018
	Chemical Engineer	008.081 014
Engineer - Distribution	Gas Distribution Engineer	007.187 014
Engineer - Operations	Industrial Engineer	012.188 030
Engineer - Standards	Materials Engineer	005.081 034
	Welding Engineer	011.081 030
Engineer - Structural	Civil Engineer	005.081 014
Engineer - Utilization	Utilization Engineer	007.081 078
Engineering Programmer	Programmer, Engineering & Scientific	020.188 030
Mathematician	Statistician, Physical Science & Engineering	020.188 046

ENGINEERING TECHNICIAN OCCUPATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Draftsman	Draftsman, Civil	005.381 014
	Draftsman, Electrical	003.281 010
	Draftsman, Electronic	003.281 014
	Draftsman, Map	017.281 058
	Draftsman, Mechanical	007.281 014
	Draftsman, Structural	005.281 018
Instrument Technician	Instrumentation Technician	003.381 026
Lab Technician	Chemical Lab Technician	022.281 014
	Electrical Technician	003.181 010
	Mechanical Engineering Technician	007.181 026
Radio Technician	Electronic Technician	003.181 014

OPERATIONS FUNCTIONS

Are responsible for the operations of the physical plant and the servicing of customer installations. Plant and equipment construction, maintenance, test and repair is typically performed or supervised by these departments. It is typical for larger companies to have specialized activities for the test, maintenance and repair of measuring and regulating equipment. Larger companies tend to include graduate engineering personnel in operations to provide technical supervision over districts or regions. These engineers have particular responsibility for maintaining conformity to safety standards, providing technical services to customers in this region, and supervising plant operations.

OPERATIONS MANAGEMENT OCCUPATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Chief Dispatcher - Work	Dispatcher, Chief, Service or Work	959.138 010
Division, District, Area, or Local Manager	Supt. Distribution II	184.168 158
	General Foreman	183.168 022
	Supt. Compressor Station	184.168 150
	Compressor Station Engineer, Chief	914.132 010
	Gas Pumping Station Foreman	953.137 010
	Pressure Foreman	953.138 010
	Stationary Engineer Foreman	950.131 014
Division, District, Area or Local Services Manager	Appliance Service Supervisor	187.168 010
	Service Supervisor	184.168 134
	Service Foreman	821.131 022
	Manager, Technical Services	189.268 014
	Mains & Service Foreman	862.138 010
Foreman - Carpenter Shop	Carpenter Foreman	860.131 018
Foreman - Machine Shop	Machinist Foreman	631.131 014

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Foreman - Regulator Shop	Meter and Regulator Shop Foreman	710.131 030
Foreman - Welding Shop	Foreman, Welding	819.131 010
Foreman - Vehicle Shop	Automobile Mechanic, Chief	620.131 010
Gas Dispatcher	Gas Dispatcher	953.168 010
Manager - Engineer Construction	Supt. Construction	182.168 022
Manager, Engineering Maintenance	Supt. Maintenance	189.131 014
	Utilities & Maintenance Foreman	899.131 014
Manager, Gas Distribution & Management	Supt., Distribution	184.168 154
Supt. - Building	Supt. - Building	187.168 194
Supt. - Garage	Garage Foreman	620.131 018
Supt. - Meter Shop	Supt. - Meters	184.168 194
Supt. - Warehouse	Foreman - Receiving & Shipping	223.168 022
	Manager - Warehouse	184.168 114
	Warehouse Foreman	929.138 014

OPERATIONS PROFESSIONAL OCCUPATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Division, District or Area Engineer	Service Engineer	639.251 010
Plant Engineer	Plant Engineer	007.187 018
	Stationary Engineer	950.782 054

OPERATIONS TECHNICIAN OCCUPATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	
	TITLE	CODE
Corrosion Control Technician	Corrosion Control Fitter	820.381 014
Plant Technician	Maintenance Technician	638.281 026
Safety Representative	Safety Inspector	821.387 018
Surveyor	Surveyor	018.188 026

OPERATIONS MANUAL OCCUPATIONS

INDUSTRY TITLE	DICTIONARY OF OCCUPATIONAL TITLES	CODE
Building Maintenance Man	Maintenance Mechanic	638.281 022
Carpenter	Carpenter	860.381 026
	Carpenter Maintenance	860.281 014
Electrician	Electrician	824.281 014
Equipment Operator	Gas Plant Operator	953.380 010
	Pumpman-Gas Plant	953.782 030
	Gas Pumping Station Operator	953.782 018
Fitter	Fitter	862.884 010
	Gas Fitter, Pressure	953.884 010
	Gas Main Fitter	862.381 026
	Pipe Fitter-Maintenance	862.381 050
	Pipe Fitter	862.381 042
Heavy Equipment Operator	Trench Digging Machine Operator	850.883 054
	Bulldozer Operator	850.883 010
Inspector - Leakage	Gas Leak Inspector	953.387 014
Instrument Repairman	Instrument Repairman	710.281 058
	Instrument Mechanic	710.281 054
Machinist	Machinist	600.280 030
Meter Repairman	Gas Meter Repairman	710.281 030
	Meter Repairman	710.281 066
Plumber	Plumber	862.381 074
	Plumber, Maintenance	862.381 082
Pressure Operator	Gas Compressor Operator	950.782 030
	Pressureman	853.782 026
Radio Repairman	Electrician, Radio	823.281 014
	Radio Mechanic	823.281 030
Regulator Repairman	Gas Governor Repairman	710.781 014
Remote Control Technician	Electronics Mechanic	828.281 022
Serviceman - Customer	Industrial Gas Serviceman	710.281 042
	Gas Appliance Serviceman	637.281 022
	Gas Serviceman	637.281 018
Truck Driver	Truck Driver	905.883 018
	Truck Driver, Heavy	905.883 022
	Dump Truck Driver	902.883 010
Vehicle Mechanic	Automobile Mechanic	620.281 014
	Construction Equipment Mechanic	620.281 046
Welder	Welder, Arc	810.884 018
	Welder, Combination	812.884 014
	Welder, Gas	811.884 014
	Welder, Repair	812.884 022
	Welder, Seam	810.782 018
	Welder, Spot	810.782 022